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Communication methods for the hearing impaired are discussed in 12 conference papers. Papers from the United States are "Adjustment through Oralism" by G. Fellendorf, "Prospectus of Patterning" (a method of teaching speech to deaf children) by M.S. Buckler, and "Visual Monitoring of Speech by the Deaf" by W. Pronovost. Papers from the U.S.S.R., Poland, and Czechoslovakia describe the "Attitude of Deaf Pupils to Mastering Verbal Speech," "Functional Signs as International Language of the Deaf," "Development of the Speaking Ability and Some of the Thinking Functions in Deaf Children," "Factors Influencing the Distinctness of the Acquired Speech of the Deaf," "Investigation of Lip Reading in Deaf," "Influence of Impediments in Hearing on Development of Speech in Children with Cleft Palate," "Diagnostic Importance of Musical Factors of Speech in Deafness," "Continuity in the Methods of Work with Speech both in the Kindergarten and at School as a Pledge of Successful Mastering of Speech by a Deaf Child," and "A Contribution to Audiological Problems in Human Communication." (JD)

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Communication Methods for the Hearing Impaired

Selected Papers from the Fifth Congress of the World Federation of the Deaf Warsaw 1967

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Preface

Communication Methods for the Hearing Impaired is a collection of 12 papers selected from those presented at the Fifth Congress of the World Federation of the Deaf, Warsaw, 1967. These papers were collected and compiled by the Alexander Graham Bell Association for the Deaf, Washington, D. C. Other collections of papers from the Congress have been compiled and are available from the ERIC Document Reproduction Service. Other collections announced in this issue of Research in Education may be found by consulting the Institution Index under World Federation of the Deaf cr the Subject Index under aurally handicapped. Titles of these other collections are:

Cultural Activities for the Deaf
Diagnosis of Hearing Loss
Education for the Hearing Impaired (Auditorily Impaired)
Psychology of Deafness
Rehabilitation of Hearing
Sociological Aspects of Deafness
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Med. Aud.-39

INFLUENCE OF IMPEDIMENTS IN HEARING ON DEVELOPMENT OF SPEECH IN CHILDREN WITH CLEFT PALATE.

/A paper/

Disorders in hearing among children with congenital cleft palate follow most fequently repeated inflammations of Eustachian tube and internal ear. These inflammations cause pathological changes in conductive and receiving parts of auditory organs.

Frequency of hearing disorders in children with cleft palates are dealt with in works by Mitrynowicz-Medrzejewska and other authors /4, 5, 8/; such disorders occur among 70-80 % afflicted with this defect. Decrease of hearing concerns primarily the pitch of sounds corresponding to the pitch of consonants mostly distorted by those children. Our and other authors' experience shows that those hearing disorders deteriorate in essential way the capacity of hearing and differentiating of spoken sounds, ability of auditory perception and the degree of memorizing individual sounds.

Purpose of the paper.

Surgical Rehabilitation Sanatorium for Children at Kon-

stancin has a ward for improving speech for the children with cleft palate after being operated in Warsaw surgical clinics /Surgical Clinic of Mother and Child/ Institute and Surgical Clinic for Children of Warsaw Medical Academy.

Having some material of our own we decided to examine the degree of hearing in children being treated in the Sanatorium and to ascertain eventual influence of hearing deterioration upon the development of their speech and the results of its improvement. The children presently staying in the Sanatorium were examined without any selection of cases.

In particular we wanted to state:

1/ Whether the development of speech in the children with impaired hearing is considerably lower than among other children with cleft palates.

2/ Whether the children with impaired hearing admitted to Sanatorium had inferior understandability of speech and worse articulation of consonants than other children with cleft palates.

3/ Whether essential differences exist in results of improving speech between the two examined groups of children.

<u>Analysis of Material.</u>

The examinations were conducted among 95 children with cleft palates in the age range of 7 - 14 years. All the children underwent already a plastic surgery of palates /72 children had plastic surgery of primary and secondary palate and 23 children only of the secondary/. The lapse of time from the operation lasted from 3 weeks to

10 years, the great majority was operated quite recently /to Sanatorium children are mostly sent immediately after surgical treatment/. From among examined children two separate groups were selected:
Group A included 73 children at the first examination did not show considerable impairment of hearing.
Group B included 20 children with marked deterioration of hearing [1] /as a rule they suffered from repeated inflammations of internal ear/. The improving treatment of both Groups was conducted according to recommendations of Warsaw phoniatric school /3/.
Average period of improvement lasted in Sanatorium 3 months.
In Group B many special methods of rehabilitation were applied depending upon the degree of impairement of the auditory organ.

Methods of stating defects of speech and hearing.
In order to assure as objective estimate of degree of hearing defects in children as possible a standard scheme of phoniatric examination was introduced in our Sanatorium. They consist of three essential parts: logopedic, audiologic and psychological.

1/ Audiologic Classifications /1,5/ consider unilateral hearing losses above 50 db., bilateral above 30 db. as insignificant unilateral above 25 db. and bilateral above 15 db. In children with cleft palates these classifications include only frequencies corresponding to speech.

A. Logopedic part - examination of speech.

1. Development of linguistic form

a/ amount of vocabulary in relation to development standards /results are being obtained by means of reproduction a heard text and a dialogue/.

b/ correct grammar shown by applying in speech declensional and conjugative inflections;

c/ correct syntax of mastered linguistical forms /rich or poor sentences, structure and order in sentence parts/.

2. Defects of articulation and sound.

a/ characteristic for every case defects of articulation /emission, distortion, substitution/ discovered by means of showing pictures, repetition, writing and reading /Kaczmarek questionnaire/.

b/ features of patient's voice - degree of nasality, control over four characteristics of sound.

B. Audiologic part - examination of hearing.

1. Examination of phonoreception

a/ examination of auditory sensitiveness by means of filtered bands of percussion sounds;

b/ examination of auditory sensetiveness on four characteristics of sound /rythm, intensity, colour, pitch/ by means of percussion instruments.

2. Examination of audibility of speech

a/ application of a list of phonetically balanced words and making a diagram of audibility of speech;

b/ examination of auditory differentiation /list of one-syllable words of similar sound/ by means of showing pictures illustrating corresponding name

c/ examination of memorizing capacity auditory patterns /this is examined by asking the patient to repeat after some time separate words or sentences without being significantly connected/.

C. Psychological part.

It includes examination of intellectual functions and emotional sphere by means of tests and observation of the child.

Results of examination.

The results of conducted examinations are shown on following tables:

Table No. 1 Development of speech among children with cleft palates. Age: 7 - 10 years.

Group	Estimate in 5-degree scale					total
	1	2	3	4	5	
A	7	15	24	10	-	56
B	4	3	2	1	-	10
Total	11	18	26	11	-	66

5-degree scale of estimate was used, namely: 1 - very poor development of speech, 2-poor; 3-a little below standard norm; 4-standard for age; 5-above norm.

Table No. 2 Development of speech among children with cleft palates. Age: 11 - 14 years.

Group	Estimate in 5-degree scale					Total
	1	2	3	4	5	
A	1	7	7	3	1	19
B	3	5	2	-	-	10
Total	4	12	9	3	1	29

Table No. 3 Understandability of children's speech before improvement in Sanatorium.

Group	Estimate in 5-degree scale					Total
	1	2	3	4	5	
A	16	37	22	-	-	75
B	11	6	3	-	-	20
Total	27	43	25	-	-	95

Estimates included in the above scale mean: 1-speech totally incomprehensible for environment, 2-speech hardly understood, 3-speech understood, 1-many errors in articulation of consonants, 4-speech well understood, 5-proper

understanding of speech.

Table No. 4 Understanding of speech among children after improvement in Sanatorium.

Group	Estimate in 5-degree scale					Total
	1	2	3	4	5	
A	1	4	36	24	10	75
B	2	3	5	9	1	20
Total	3	7	41	33	11	95

Table No. 5. Results of speech improvement

Group	Lack of improvement	Improvement of 1 degree	Improvement of 2 degree	Improvement of 3 degree
A	4	40	28	3
B	4	4	8	4
Total	8	44	36	7

Discussion.

In order to estimate whether relevant differences really exist between both examined groups of children necessity arose to make statistical analysis of the results.
To state if the development of speech results among children shown on Tables 1 and 2 and being adverse for children with considerable losses of hearing are statistically significant - they underwent analysis by test Chi. In the analysis

the principle presented by Guillford /2/ was taken into consideration pertaining to procedure in case if expected value in any class is lower than 10. Value obtained P = 0.06.

Similar method of analysing results contained in Table No. 3 was used. Value obtained P = 0.05.

Comparing data in column A of Table No. 4 with those in column A of Table Nr. 3, we see that only 4 children did not show a positive result of treatment. There is a very slight probability that such tables be purely accidental, lower than 1 : 1000. Comparison of data included in columns B in both Tables leads to similar conclusion. Statistical justification is however difficult because the quantities are too small in particular columns. To answer the question if significant differences exist in the results of improvement in Groups A and B of children /presented in Table No. 5/ also a statistical analysis by means of test Chi^2 was made.

It has shown casualness of obtained disposition. One might think that the results of improvement did not depend upon the defect of auditory organ. Analysis however, does not take under consideration the length of time during which the children stayed in Sanatorium and intensity of conducted exercises. Both those values for children belonging to Group B were considerably higher. The results of investigations permitted to draw following conclusions:

1. Development of speech among children with cleft palates with accompanying serious defect of hearing is smaller than in other children with cleft palates.
2. Children with cleft palates connected with hearing defects admitted in Sanatorium used speech which was harder understandable for the environment than other children with the same affliction.

3. Improving treatment raised the degree of understandability of speech in considerable majority of children belonging to both examined groups and this improvement was often very high. Significant differences of improvement of speech results has not been found in both examined Groups, but that might have been caused by a too small number of cases.

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INVESTIGATION ON LIP READING IN DEAF

/The paper/

Getting in touch among hearing people and the more among the deaf by means of oral speech is a most complicated phenomenon. Deafness not only makes difficult the mastering of the technique of speaking but it also forces deaf people to master the skill of lip reading. Without the latter the deaf have no possibility of mutual current contact with hearing people. They become most isolated from the community. Therefore, the study of speaking and the one of lip reading plays such an important role in the life of deaf.

The elaboration of right methods and ways of teaching the deaf to use the speech is conditioned by previously performed investigations in this field.

This paper presents the results of investigations only on the way of lip reading by the deaf.

In Poland and over the whole world the teaching of children in spesial schools which are destined for them, is commonly applied. Recently, besides this system of education there appears still more often the system of teaching deaf children together with the hearing in normal schools. Finally, there are adult deaf working professionally among the hearing. Some of these deaf were taught in spesial schools, others in normal schools.

The following categories of deaf children and adult were investigated:

1/ deaf children learning in special schools and living in boarding houses;
2/ deaf children learning in special schools and living at home among hearing people;
3/ deaf children learning in normal schools, together with hearing children, and living at home;
4/ deaf adult graduate from special schools, professionally working and living among hearing people;
5/ deaf adult who learned in normal schools together with hearing children, and who are now living among hearing people.

In the process of investigation the idea was to:
1/ determine the way of lip reading in separate groups of children and adult;
2/ determine the differences appearing in the way of lip reading;
3/ ascertain which way of teaching results in better mastering of lip reading - in special schools or in normal ones.

From each of the above mentioned groups 10 persons were chosen, the ones whose capacity of lip reading was the best. Children from special schools were chosen by the teachers, adult deaf - by District Delegates of the Association of Deaf, and only out of the selected deaf 10 best candidates have been chosen in every group by means of special examinations. This choice of children from normal schools was more limited and these children were not always those who had the best capacity of lip reading.

The chosen children read from the lips of the same person and wrote on a sheet of paper 5 easy sentences, then they wrote in a changed successiveness words comprised in these sentences, next syllables, and finally each of them repeated the letters several times.

The sentences read by adult deaf were significantly more difficult.

People who get in touch by means of oral speech use sentences. Words and especially letters and syllables are of less importance for them. Therefore, the analysis of the results has been started with discussing the ability of reading sentences. While discussing I have considered the mean results for each group, as well as the best and the worse results in separate groups.

Table 1

	Children from special schools		Childr. from normal sch.	Adult deaf after school	
	board. house	home		spec.	norm.
1	2	3	4	5	6
Mean results /in a group/	4%	6%	22%	30%	64%
sens.		8	33%	36%	68%
Best results /individual/	20%x2	40%x1	40%x4	60%x2	100%x1
sens.		60%x1	60%x2		
Worse results /individual/	0%x8	0%x8	0%x3	0%x2	20%x2
sens.			0%x2		40%x2

1/ It results from the first three columns that the capacity of lip reading in deaf children learning in special schools and living in boarding houses is the worst, it is better in children living at home, and the best in children learning in normal schools together with hearing children and living with hearing people too. This means that the correctnes of lip reading of sentences increases in children together with learning in schools if such an organization of teaching and education process is applied that provides a better contact of the deaf with the hearing. Therefore, the teaching of deaf children together with the hearing ones gives the best results. It is significant that the everyday influense of the speaking environment on deaf children is of greater importance than teching

by experts in special schools, as deaf children living in family homes and attending normal schools, where teachers are not experts, know better the lip reading than those attending special schools where experts, especially trained teachers and tutors are working.

2/ It results from the comparison of two last columns that the adult deaf graduate from normal schools, if being permanently among hearing people, know better the lip reading than adult graduate from special schools, being under the same conditions. A very big difference which then appears once more and still more, enhances the advantage of deaf children learning in normal schools together with the hearing, as compared with the system of separate special schools.

3/ The comparison of column 4 with 1 and 2, and column 5 with 3 shows that the adult deaf, being permanently together with the hearing, as a rule, master the lip reading better than the children who learn in schools. This means that in the course of a continuous stay of deaf among the hearing improves their ability of lip reading independently in which schools the deaf had been formerly taught.

In this respect, the advantageous influence of the environment of the hearing will be still greater if we add that deaf pupils who leave the school as speaking and lip reading children. After several years of stay among the deaf using gesture language, they forget their skill and start using the gesture language.

In the process of understanding not only sentences appear, but words, syllables and letters too. The arrangement of these elements in speech of the examined categories of deaf is interesting for the organization and methods of teaching.

The arrangement of speech elements in separate categories based on the computation of mean results in groups.

Table 2

	Children from special schools		Children from normal schools	Adult graduate from schools	
	board. house	home		spes.	norm.
1	2	3	4	5	6
Sentences	IV-4%	IV-6%	IV-22%	III-30%	I-64%
Words	I-56%	I-60%	I-67%	I-51%	II-62%
Syllables	III-35%	III-32%	III-29%	IV-29%	IV-28%
Letters	II-44%		II-44%	II-38%	III-41%

Table 3

The arrangement of speech in the best reading of sentences in separate categories of deaf

	Children from spec. schools		Children from norm. schools	Adult graduate from schools	
	board. house	home		spec.	norm.
1	2	3	4	5	6
Sentences	IV-20%	III-40%	III-40%	II-60%	I-100%
Words	I-80%	I-90%	I-90%	I-75%	II-80%
Syllables	III-38%	IV-20%	IV-36%	IV-42%	IV-36%
Letters	II-40%	II-42%	II-50%	III-53%	III-47%

1/ When comparing the arrangement of separate elements of speech in both tables, we can easily state that the adult deaf graduat from normal schools and being permanently with the hearing, understanding the best the oral speech place first of all the reading of sentences, word reading is on the second place, letter reading on the third and syllable reading on the fourth place. This is different in the remaining categories of deaf. Those deaf always read the best the words, and sentence reading is on a farther place. It is of interest that the farther fourth place in both tables

is occupied by the skill of sentence reading in deaf children learning in special schools and living in boarding houses. Somehow nearer place - in one table - the fourth in another - the third, is occupied by sentence reading in children learning in special schools but living in their family houses, and in children attending normal schools, And finally, the place that is most close to the right arrangement is in one table on the second, and in the other on the third place in adult graduate from special schools, but being now together with the hearing. This fact /among others/ means that during the teaching of lip reading in schools, particularly in special schools, too great an attention is being drawn to the teaching of letters and word reading, and too little one to get in touch by means of using full sentences.

2/ When analysing in turn more exactly the data comprised in both tables in columns 2, 3 and 4, we ascertain that the gradual growth of the skill of reading sentences by the examined children groups is accompanied only by a gradual growth of the skill of reading words with a lack of improvement of the capacity to read letters and syllables.

3/ In turn, most interesting is the comparison of the degree of the skill to read the cited special elements by a deaf person, the best one was chosen from among all the examined who understood the speech. It appeared that she read errorless all /100%/ sentences, but at the same time could not read correctly 20% of words appearing in the sentences she read, 53% of letters and as much as 64% of syllables /Table 3, column 6/. This surely proves that speech understanding - correct reading of sentences depends not only on the skill of word , letter or syllable reading. There must be still more factors which make possible a correct sentense reading, correct speech understanding with a lack of possibility of correct reading of words, letters and syllables. There is much to show that these elements are: notion development in deaf and their good mastering of the mother language "spirit", the secret of sentense construction, connections and dependences between separate words

which exist in these sentences. Then, there appears in the deaf the phenomenon of a correct "guessing" of those words which they cannot read from the still changing lips. This viewpoint is ascertained by the deaf themselves in their statements and it is proved by the fact appearing in the present investigations that relatively many deaf read well the content and the sense of entire sentences but they change within them some words into others, thus, they cannot read them correctly /See Table 2/.

When assembling the existing, however not complete because of the lack of place, considerations, it should be stated that they explain in a certain degree some doubts concerning the lip reading which appear in theory and in practice of teaching deaf children. They also supply some additional elements to evaluate the system of deaf children education in special schools.

First of all, it results that:

1/ In spite of numerous difficulties it is possible to reach not only a correct understanding, but even an exact lip reading of people who address the deaf.

2/ The essence of reading consists in sometimes 100% exact but more often in a right, as regards the content, reading of a logical whole like a sentence, with a simultaneous lack of the possibility of an errorless word reading and the more of letters and syllables.

It results from theabove said that a correct lip reading depends not only on the quickness of perception which conditions a possibly errorless reading of words, letters and syllables, but also on notion development, on the fund of the knowledge of the deaf and on the degree of the language knowledge, in particular on the obligatory logic of sentense construction and interbal connections. Without these elements it seems to be impossible to master the skill of exact lip reading.

It results from the above mentioned that in the process of education, more attention than it has been done up till now, should be paid to the general development of deaf and to get them acquainted with the structure

of everyday language. This requires the use of full, logically constructed sentences while speaking with the deaf, and a raise of the level of their notion development as well.

3/ The considerations we did prove the existence of big differences between the skill of deaf children learning in special schools and the skill of these deaf who attend normal schools. This means not only the necessity to reform the existing ways and methods of education, but it calls for a reform of the entire educational system for deaf in special schools. This reform, as it results from the above presented investigations, should tend to liquidate the deep isolation of deaf in the process of teaching and educating, from the normal environment and the greatest possible including them into the stream of the life of the hearing. Trials to provide for deaf children a purposefully organized pedagogic care are of a special value. And this should be done since the moment deafness had been stated. These children should be included for education into normal schools among hearing children.

4/ The investigations showed that the study of lip reading by the deaf takes place not only in their childhood and youth, but in adult age too, as well as in the course of life and professional work. The results depend first of all on the fact in which way the deaf get in touch among themselves in their surrounding. The deaf using oral speech improve their skill of lip reading, the ones who use gesture language loose this skill. This should be taken into consideration when directing the deaf to professional work.

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Ped-4

FACTORS INFLUENCING THE DISTINCTNESS OF THE ACQUIRED SPEECH OF THE DEAF

/The Paper/

Man's activity within society depends above all on the possibilities of his acquiring the experience of past generations. He learns this experience by entering into social life. Language is his main tool for getting knowledge of surrounding reality since it allows him to pass from a concrete and depictive way of thinking to an abstract one. Speech plays the main role in communication by means of language. Participation of the deaf in social life is thus dependent chiefly on their possibility of communicating with their environment.

Language is the basic means of mutual communication among people. For a deaf person, therefore, taking part in social life is determined by his skill in using it for this purpose.

Since speaking is the basic form of communication through language the problem of its distinctness plays a great part in people's everyday life. Even the most logically constructed sentence and with most basic contents may be quite unintelligible when pronounced wrongly.

The distinctness of speech plays an essential role in direct communication with other people and in understanding them.

I have chosen the factors influencing the distinctness of the speech of the deaf as the most essential in the complex problem of language.

Factors determining the distinctness of the speech of the deaf will be discussed in connection with the results of the examination of 672 deaf people who had finished primary and vocational school.

The distinctness of their speech was tested as follows.

The subjects were divided into groups of 84. The first group consisted of 84 deaf children aged from 14 to 15. All of them had finished an eight year elementary school and following the curriculum in force in deaf schools they were expected to be able to communicate by means of speech.

The second group consisted of deaf people from 18 to 19 who had finished a vocational school. Between their 15th and 19th years they had no special training in speaking but were instructed by a special teacher.

The third group was made up of 84 persons between 19 and 23. They had finished a vocational school and, during the experiment, were just becoming independent, starting work and entering into social life.

The other subjects were divided into 5 groups of 84 each. All these deaf people are leading stable lives their conditions of life seldom changing.

The subjects were spoken to by a man whom they had never seen before. He asked them the following questions:

1. What is your name ?
2. Where are you living ?
3. How old are you ?
4. Where did you attend school ?
5. Where do you work ?
6. What profession have you learnt ?

Every talk was recorded and then played to 4 people who had never heard a deaf person speaking.

The answers of each of them were listened to by 4 different persons who attended the Xth or XIth year class of a pedagogic school or a school of general education.

When the answers given by one of them were exactly reproduced by all 4 persons the speech of the deaf man was considered to be distinct.

On examining 672 deaf people I obtained the following results.

Age of subjects	Number of subjects	Number speaking and not speaking distinctly		%
13 - 15	84	Yes	69	82
		No	15	18
18 - 19	84	Yes	48	57
		No	36	43
20 - 23	84	Yes	36	44
		No	48	56
24 - 28	84	Yes	9	11
		No	75	89
29 - 33	84	Yes	6	7
		No	78	93
34 - 38	84	Yes	6	7
		No	78	93
39 - 43	84	Yes	12	14
		No	72	86
44 or more	84	Yes	9	10
		No	75	90
Total		Yes	195	29
		No	477	71

The distinctness of acquired speech is best among the group of subjects aged from 14 to 15. It falls in the older groups. The years spent in vocational school together with the following year or two form a crucial period. Deaf people who have not lost the distinctness of their speech during this period will continue to speak distinctly for the rest of their lives.

Psychological and medical experiments have proved that every deaf person if mentally normal and not affected by constitutional speech defects can be taught to speak. He needs, however, special conditions for this. In Poland it is the school

for the deaf which are chiefly concerned with this problem and whose first goal is instruction in speaking.

Pedagogical care is begun during the child's fourth year. The children attend a kindergarten for three years then an elementary school for eight years and later a vocational school for the deaf for three years.

The instructive and educational efforts of the school result in giving 82% of the deaf children the faculty of communication through speech by the use of simple sentences.

The ability to use speech, however, is not fully permanent this depending on the environmental conditions of the child. The influence of the environment on the distinctness of the speech of the deaf person can be considered only when he starts learning to speak under the guidance of activities specially organized and introduced into his environment.

There are a number of deaf people who to a greater or lesser extent could speak before becoming deaf.

Among the subjects aged from 14 to 19, examined by me, there were 15,4% who became deaf after the second year. All of them could speak distinctly. Among the subjects over 20 years of age there were 4,13% who became deaf after the second year, including two cases when the subjects became deaf in the fifth and eighth year. None of them, however, spoke distinctly.

This is due to the fact, that, after leaving school, they were not compelled by their environment to communicate through speech.

The results of examination of the deaf people's parents show in what way the environment can influence the distinctness of speech.

The educational level of parents plays a great part in this respect.

The educational level of the parents of 195 distinctly speaking deaf persons is given in the table below.

Educational level of the parents	Number out of total 195 deaf people	%
high	6	3,08
secondary	18	9,23
elementary	120	61,54
incomplete elementary	51	26,15

The next table shows the educational level of the parents of 477 indistinctly speaking deaf persons.

Educational level of the parents	Number out of total 477 deaf people	%
high	3	0,63
secondary	37	7,76
elementary	288	60,38
incomplete elementary	149	31,23

When comparing the two tables it is evident that the parents with higher education take better care of their children. They try to secure the best conditions for learning to speak for their children. This is also connected with their financial resources. As a rule people with higher education earn more and consequently can afford to satisfy more fully their children's material needs.

Owing to the development of culture and education and to the progressive rise in prosperity such differences gradually disappear.

The distinctness of the speech of deaf children living at home and not at a boarding school designed for the deaf is much better. Those attending boarding schools are to some extent isolated from the society of hearing people and are confined to the company of those similarly afflicted. Communication among deaf people being based on sign language such people have no opportunity of using their skill in speaking in natural circumstances. Even the best educator, when having 18 to 20 deaf children to take care of, has little time to spend in making their speech more permanent.

The fall in the distinctness of speech from 82% to 54% during the period of attending vocational school can be related chiefly to the lack of exercise in speech-correction.

Moreover, the amount of time devoted to general education and the arrangement of school curriculum excuse the teacher from not insisting on correct pronounciation. Vocational teachers are not trained for work with deaf children and consequently they do not devote enough time to the cultivation of speech.

The great degree of independence of the deaf attending a vocational boarding school is very advantageous in itself but makes communication through speech quite unnecessary outside the school. There is a fundamental shift in deaf person's life after finishing vocational school. Distinctness of his speech becomes fully permanent and even develops or else is lost depending on where he starts working.

The three first years after finishing vocational school are decisive in whether the deaf person will communicate through speech or not. These who started working among hearing people retain the faculty of communication through speech. Of the deaf people examined and working among hearing people only 5,26% were not able to speak distinctly. Here the necessity of using speech in order not to lose ones employment comes into force.

Among the deaf people examined who work in establishments employing more than 5 deaf persons /employment of 40 to 60 deaf people together is not a rarity/ only 5,4% speak distinctly. This is caused chiefly by the fact that the deaf do not feel the need of using speech in their working capacity. In such establishments deaf people are employed in a one-shift system, they work together by machines, maintain social relations among themselves and intermarry which, taken together, spares them the trouble of using speech. One of them, usually more gifted that the others, becomes the leader of the group and knows how to communicate with the management through speech. It is his task to arrange all matters cropping up between deaf people and hearing fellow-workers or the management of the establishment.

The above results indicate that the distinctness of speech of a deaf person who has finished an elementary school for the deaf is influenced in the first place by his environment. If he finds himself in such a situation that the communication through speech will be necessary for his vital needs the distinctness of his speech will become permanent. But if he does not find circumstances favorable enough the distinctness of his speech will vanich.

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Psych – 3

DEVELOPMENT OF THE SPEAKING ABILITY AND SOME OF THE THINKING FUNCTIONS IN DEAF CHILDREN

/Communication/

The speed of development of the speaking ability as well as its lexical and grammatical level have an indisputable influence on thinking processes such as e.g. abstract tkinking and generalization which belong to basic operations in forming notions. The ability to think in an abstract way and of using notions belongs to the cognitive functions of the language and its development, as functions of the social means of communication. In deaf children the second of these two aspects is particularly neglected.

In view of the limited store of notions and lack of an adequately developed communication function of the language as an instrument of thinking, the question poses itself: How do thinking functions develop, abstract thinking and generalization in particular and what is their influence on the operations of classification? Another question is how do these processes change with the development of the language? In this connection we have conducted studies on the operation of classification in deaf children.

Method

The method used was a test consisting of 30 pictures illustrating concrete objects belonging to 6 superior notions: 1/ plants, 2/ animals, 3/ clothes, 4/ food,

5/ people, 6/ vehicles. The examination technique was based on the Goldstein and Scheerer test, and consisted of two stages: a/ looking at one of the pictures and chosing all other pictures similar to it in some way, b/ pointing to the essential resemblances between the selected objects /the deaf wrote/.

The classification functions in their highest stage are characterized by correctness of performance and of verbal expression /notional definition/. A disturbance of the process may occure in the 1st or 2nd stage which permits to compare action with verbalization. As a result, it points to the process of the formation of the notion and the relation between correct concretization and its verbal definition.

The examination covered deaf pupils attending the 2nd to 7th grades[i/] of a special school in Lublin. The number of these pupils was 123. The control group consisted of 100 normally hearing children.

Results

The obtained results were calculated in percent and divided according to the ability of classification and verbal formulation.

The following particularities were distinguished in the manner of classification:

a/ correct classification- the child pointed to all the pictures related to a given category of objects,

b/ partly correct classification- the child pointed only to some of the objects, e.g. in the group of animals, only to birds,

c/ classification accidentally correct - the child pointed accidentally correctly to the objects related to the given category,

d/ the child pointed to different pictures having no connection,

e/ no classification function at all.

The results of the classification of pictures by the deaf pupils have been expressed in percent on the following table:

Table 1

	a	b	c	d	e
Group 3	44.4	20.8	20.1	11.7	3
Group 4	47.4	26.2	18.5	7.9	0
Group 5	70.3	20.0	7.5	1.8	0.4
Group 6	79.0	16.5	4.3	0	0.2
Group 7 and 8	87.0	12.5	0.7	0	0

Results of the classification of pictures by normally hearing children in percent:

Table 2

	a	b	c	d	e
Group 1,2	40.7	23.3	36	0	0
Group 3,4	66.6	21.4	12	0	0
Group 5	78.7	9.5	10.7	0	0

The following division was adopted according to the verbal formulation /what is the resemblance between?/ and the superiority of notions:

a/ answers giving the superior notion proper for a given group of pictures /"animals" - in the case of pictures of animals/,

b/answers giving a notion referring only to part of the objects /instead of "plants" - "flowers"/,

c/ answers giving notions inadapted to the contents and range of the correct category of objects,

d/ answers giving notions referring to one object of the group only /instead of "food" - "bread", "apples"/,

e/definition of both the category and the subgroup by pointing to the function /for eating - for walking/,

f/ definition of both the category and the subgroup by associations based on resemblance, appurtenance or place/, e.g. instead of "food" - "in the shop",

g/ definition by means of a neologism,

h/ no answer.

Results of the answers obtained from deaf pupils in percent:

Table 3

	a	b	c	d	e	f	g	h
Gr. 3	2.7	18.7	8.3	7.6	1.3	10.4	8.7	32.3
Gr. 4	27.5	26.9	4.6	13.5	1.9	12.8	6.4	6.5
Gr. 5	42.0	20.2	4.8	9.2	3.1	4.6	5.0	11.1
Gr. 6	40.5	17.3	2.9	7.2	6.3	10.8	4.2	10.8
Gr. 7 and 8	60.1	15.1	1.3	7.2	5.1	6.1	-	5.1

Results of answers given by normally hearing children in percent:

Table 4

	a	b	c	d	e	f	g	h
Gr. 1 2	47.5	18.4	6.6	2.5	17.5	0	0	7.5
Gr. 3 4	75.0	15.2	1.2	0	6.2	1.2	0	1.2
Gr. 5	88.4	6.2	0	1.2	1.2	1.2	0	1.2

Conclusions

1/ The obtained results point to differences in both the classification and verbalisation functions in deaf and normally hearing children.

2/ The operation of classification in normally hearing children was done to a larger extent than in the case of deaf children according to an anticipating plan, this plan being determined by a better developed verbal structure, which is proved by the following facts:
a/ hearing pupils from grade 1st and 2nd, while classifying objects did not select them chaotically as the case was for the deaf even those attending grade 5.
b/ all hearing pupils from grade 1st and 2nd made a more or less correct classification, while deaf pupils even in grade 6 were not able to make the required differentiation of some objects.

3/ Considerable differences appeared in answers:
a/ smaller number of correct answers than in the case of

normally hearing children, concerning notions adequate for a given group of objects,

b/ big percentage of answers of the deaf by association on the basis of resemblance or place /e.g. in the shop, in the forest.

4/ normally hearing children did not use neologisms which often appear in the answers of deaf children,

5/ deaf children often did not reply at all,

6/ with passing to higher grades, the percentage of correct classifications and adequate definitions /proper notions/ grows both in deaf and hearing children.

The obtained results point to the dependence of mental operations on the development of speaking. This dependence appears even in non-verbal operations.

Notes:

1/ Only pupils from the 3rd grade on, were able of writing the words required by the test.

2/ In connection with the similarity of results, the number of grades was reduced, two classes being taken together /1st, and 2nd, 3rd and 4th/.

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Comm.Meth. - 4

FUNCTIONAL SIGNS AS INTERNATIONAL LANGUAGE OF THE DEAF

/The paper/

The activity of the WFD, its prestige as an international organisation and its ability to solve successfully the problems, connected with deafness, in many respects depends on how the commission on unification of mimiery will fulfil its main task: to create on the basis of national gestures a unified system of speech gestures ensuring mutual understanding between representatives of national associations of the deaf, working within the bounds of the WFD.

Creating a unified mimiery, supposed to be a basic means of communication between deaf members of the WFD /during congresses, conferences, etc./, has some objective premises, namely, clearness and figurativeness, and under certain favourable conditions /need to communicate, enrolling specialists, experience in this work, etc./ this problem can be solved, first positive results achieved in the field being a testimony to it.

The activity on unification of mimiery, begun after II International Congress in Zagreb more than 10 years ago, was in fact confined to the publication of "The First Contribution" that contained 300 speech gestures, recommended for communication.

The activity of the commission during the past period was not satisfactory, there were not used real possibilities for working out universal, comprehensible to all functional gestures the absence of which is an obstacle to organisation of a special service of interpreting for the deaf.

The analysis of the carried out work indicates that the discord in the system and methods of conducting unification of gesture language /D.Vukotić, Stockholm, 1963/, imposing difficulties on the activity of the commission, were overcome after discussing and accepting the suggestions of the All-Union Society of the Deaf about the principle of selection /identity/ and features of functional gestures /figurativeness, preciseness, plasticity/, the remaining difficulties are those of organisation and techicality /appointing representatives, periodicity of sessions, exchange of information, publication of materials, etc./, and can be obviated in the process of work. The main obstacle to a satisfactory solution of the problem of unification of mimiery was lack of concrete program of the activity.

The project of a program of the work of the commission, suggested here, includes main points concerning basic aspects of the problem of unification of mimiery: representation and participation in the commission, studying and generalization of materials, preparing recommendations and their approval, publication of functional signs being the International language of the deaf.

I. Representation and participation of national associations

All members of the WFD interested in the working out of the international language of the deaf, take an active part in the work of the commission on an equal footing.

a/ Commission /staff 9 power/. National associations of the deaf, being members of the WFD and represented at the Congress, appoint from the members of the delegation a permanent representative for conducting work in the commission during the period between Congresses. The members of the commission submit for its consideration materials, participate in discussing recommendations, promote spreading unified signs on a national scale. Sessions of the commission are held once in 2 years. Decisions are taken by 2/3 majority of votes.

The commission is headed by a chairman, appointed by the Bureau of the WFD.

b/ Committee of experts.

Experts of the commission /3-5 in number/ are elected by the commission from its members and asserted by the Bureau of the WFD for functioning during the period between Congresses.

The committee of experts makes a concrete plan of work, generalizes and systematizes materials, gives recomendations concerning functional signs which are selected into the stock of unified mimiery.

Permanent relations between the experts are realized by means of consultations in written form and exchange of programs through secretariat of the WFD.

Sessions of the committee of experts are held annually /the place and time of sessions are agreed with the General Secretary not later than 3 months before next session/. The work of the committee of experts is guided by the Chairman of the commission on unification of mimiery.

II. The Plan and conducting of the work

A concrete plan of the work of the commission is prepared by the committee of experts for 2 years and is approved by the commission.

On the basis of studying the main documents of the WFD: regulations, program, decisions of the Congress and the Bureau, resolutions of the commissions, etc. the

experts determine the size and the contents of the vocabulary within the bounds and in donformity with which it is necessary to select functional signs that are subject to unification.

The recommended vocabulary is distributed among the members of the commission who are supposed to prepare materials and send them to the committee of experts /illustrated vocabularies, drawings, photographs, films/. On the basis of the national materials the experts, following the principle of selecting identic signs and the requirements demanded of unified gestures, work out recommendations which are examined by the commission. Thus, during the period between Congresses not less than 600 gestures must to examined and prepared for recommendation in order to ensure high quality service of interpretation.

Procedure and technical questions

The recommendations of the committee of experts, adopted by the commission by voting by show of hands, are passed to the secretariat of the WFD for approval at the meeting of the Bureau and for publication of unified gestures.

The publication in the form of special editions and films is carried out by secretariat with the participation and financial help of the national associations, members of the WFD. Adopting and realizing the program of the activity recommended by the commission will guarantee a successful solution of the problem of unification of mimiery within the bounds of the WFD.

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Psych - 25

ATTITUDE OF DEAF PUPILS TO MASTERING VERBAL SPEECH

/Communication/

Development of deaf pupils' attitude to mastering the language has not been much studied heretofore by psychologists. Nor are elucidated the motives urging deaf children to master speech. No studies have been conducted to determine the attitude of deaf adults to their achievemnts in assimilating different aspects of speech.

Experimental investigation carried out on 190 pupils of the 4th-8th forms from schools for deaf children /1951--1952/ and 50 pupils of the 6th-12th forms from the same schools /1963-1964/, gives reason to report on peculiarities of their attitude to mastering the language and the motives for mastering speech in pupils of junior, middle and senior school age.

Children of junior school age /4th form - 10-11 years/ are happy and proud to report that they have learned something new - "to speak by lips" "by voice". They willingly tell about their progress, express the desire to speak "like those speaking", and report how their parents rejoice at it. The pupils especially emphasize the importance of oral speech for them. They almost do not mention

reading as a source through which they receive knowledge, and writing as a means of communication. All the children are confident that when they will grow up they will speak well.

Attitude to mastering the language becomes more complicated in children of middle school age /the 5th-6th forms/. It enters the system of relations connected with their teaching, school interests, and they begin to treat the language as a subject most important for them. The main motive in mastering the language is the desire to study well and get good marks. In this connection children speak about the necessity to write carefully and without mistakes, and to read out loud fluently and coherently.

Owing to their progress in learning and speech development an incentive appears to contact with a wider circle of people, and this, in its turn, engenders new motives. In children's statements "distant motivation" appears, and more often they begin to tell that they will have to speak well when they will work together with hearing people. They begin to notice and analyse their speech defects, and to consider them critically. In this connection motives are formed aimed at overcoming insufficient distinctness of pronunciation and inability to expound material "with their own words".

By the end of the middle school age educational interests of deaf pupils grow into cognitive interests. They begin to realize that due to the language they acquire much new interesting knowledge. The book becomes for them a source of new information. New motives appear - desire to read, to subscribe to a library, to discuss a book read. An incentive to use active written speech extending the sphere of communication possible for them gets stronger. A desire appears to independently write letters to relatives and friends, get acquainted with schoolchildren from other cities and even countries by correspondence.

Senior forms students associate mastering speech with their coming labour activity. They single out problems on which they want to associate with a wide circle of people, they have a need in communication and conviction that they possess necessary posibilities for this.

Each of speech types acquires for them its special significance. They single out the importance of business written speech and very highly appreciate cognitive possibilities opened up by reading. First and foremost they want their oral speech be understood by hearing people with whom they are soon to work. Such an attitude entails combined action motives on the basis of which they put concrete tasks to improve their oral speech. Senior schoolchildren seek to eliminate everything that prevents hearing people from understanding them. They try to use more oral verbal speech at lessons and off the school, practise pronunciation and accentuation, seek to master colloquial speech, enrich their vocabulary and see to correct grammatical shaping of speech. Frequently they express a regret that they did not try enough to master speech in the junior forms.

The investigation showed that with every year of deaf children's teaching at school their attitude to mastering speech become more involved, differentiated and is included into still more versatile system of their interests and aspirations. A change in the attitude to mastering the language in the course of development results in the appearance in deaf children of more dismembered and rich motivation of using speech.

A discrepancy was revealed in deaf pupils between early appearance of "distant motivation" and lately forming personality attitude, fight for mastering speech. This discrepancy should be overcome by pedagogic influence early developing in deaf schoolchildren on the basis of optimistic distant motivation, a system of "close" motives

urging them to extend communication circle and permanently improve their speech.

Soviet surdopedagogics and psychology should take care not only of discovering the best methods for teaching deaf children to speak but also of cultivating in them ever growing positive attitude to mastering verbal speech which is part and parcel of their living relations gradually becoming complicated and enriched.

At present investigation is under way into the attitude of pupils of night schools for adults to mastering different aspects of speech, and estimation of their significance for the extension of communication possibilities.

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Psych. – 13

VISUAL MONITORING OF SPEECH BY THE DEAF

/The paper/

Although many new electronic devices have been developed which produce visual displays of speech, a critical question regarding the use of these aids by the deaf remains. How can deaf individuals learn to use visual displays of acoustic information /pitch, intensity, duration, vowel or consonant quality, etc./ to monitor a vocal-physiological task? Since the deaf probably monitor their own speech kinesthetically, how can they convert visual information about an acoustic event into useful information for kinesthetic monitoring of voice and speech?

Several recently completed pilot studies, and one extensive research project conducted by Kopp /4/ at the Detroit School for the Deaf, have been summarized in a recent article in the Volta Review /6/. The results of these studies are encouraging for the deaf. Considerable additional research is now underway in several countries.

This paper will describe two research projects being conducted in the Boston area. Cooperating in the research projects are staff members and deaf individuals associated with Boston University, Northeastern University, Massachusetts Institute of Technology Lincoln Laboratories, The Boston School for the Deaf, The Horace Mann School for the Deaf, The Speech and Hearing Foundation of Massachusetts Adult Deaf Program and the Oral Deaf Adults Section of the Alexander Graham Bell Association for the Deaf. Results of completed projects will be summarized.

A pilot project with the Voice Visualizer has been reported previously /7/. The Voice Visualizer, developed by Dr. Robert Lerner of the Massachusetts Institute of Technology /5/, uses a polar analyzer circuit to display discrete patterns of vowel and consonant sounds on an oscilloscope screen. The patterns for some of the speech sounds are shown in Figure 1.

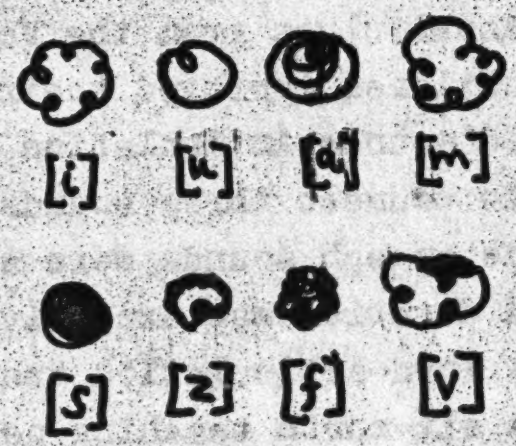


Figure 1. Patterns of sounds on the Voice Visualizer.

The patterns for the following sounds

[i] [ɛ] [ɑ] [o] [u] [m] [s] [z] [f] [v] [ɹ] [l]

can be visually discriminated by four-year old deaf children.

In the pilot study, twelve deaf students, ages 7 to 16, who were being taught in their classroom by an "elements approach", were given two periods weekly of speech training for six months. It was found that learning was easier when the children were taught to contrast two sounds than when practicing only one sound. Some children became discouraged when the visual display revealed the incorrectness of their articulation. This problem was overcome partly by teaching contrasting sounds, by arranging a teaching sequence that progressed from easier to more difficult sounds, and by using multi-sensory clues to the correct articulation of the sounds as a supplement to the visual clues from the Voice Visualizer. Most of the twelve children improved their ability to produce the sustained sounds in isolation. Some of the students were able to connect three sounds to form a word. However, although the speech sounds were articulated accurately, the word duration was excessively prolonged by most children. A word-articulation test was given before and after the six-month teaching period. Improvement was heard for initial and final consonants, but no improvement was heard for the vowel sounds.

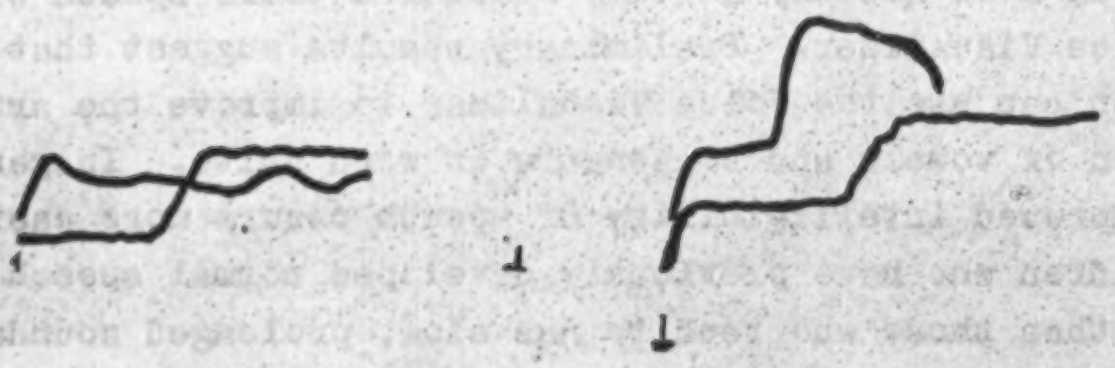
An experiment is now being conducted with two groups of pupils, ages 7 to 9 years. One group is being trained to articulate consonants only, the other is being trained to produce vowels. For both groups, all speech practice uses word units, rather than isolated sounds. Children in the consonant group, monitor their productions of either the initial or final sound of the word, /for example, man, broom / children in the vowel group monitor the vowel sound in a stressed monosyllabic word /for example, car, food/. The speech sounds are taught in word pairs /man-fan, home-huff, feet-food/. Twelve lessons have been designed for the consonant group and similar number of lessons for the vowel group.

Each child will progress through the lessons at his own rate. When a child completes the consonant lessons, he will then be taught the vowels. The vowel group will learn the consonants later. Data for the experiment will be analyzed from tape recordings of the same word-articulation test given each month. In the early months of the experiment, it was necessary to teach children to speak the words more quickly as they monitored their speech with the Voice Visualizer. Preliminary results suggest that children can use the Voice Visualizer to improve the articulation of vowels and consonants in word units. In general, improved intelligibility of speech occurs more easily in children who have previously developed normal speech rhythm than those who tend to use slow, prolonged sounds and words.

A new unit has been constructed for the experiment. A 3-inch oscilloscope is located in the center of the front of the unit. The unit is 9 inches high, 8 inches wide, and 14 inches long. The only external control is the power switch; all adjustments are made internally at the time of manufacturing. The pilot unit required no servicing in three years. The new unit weighs approximately 10 kilograms, and can be operated by young children. A manual for using the Voice Visualizer, and technical information for the construction of the equipment, is being published.

The Instantaneous Pitch-Period Indicator, developed by Dr. Ladislav Dolansky /1/ of Northeastern University, provides an instantaneous oscilloscopic display of a speaker's intonation pattern. A teacher's intonation pattern will remain on the oscilloscope screen so that deaf pupils may observe their attempt to match the teacher's pattern. The oscilloscope is erased electronically after each practice word or phrase. Phrases as long as two seconds can be displayed.

A pilot study using three eleven-year old deaf children was conducted by Dolansky, Ferullo, O'Donnell and Phillips /2/. One deaf child's matching of Miss O'Donnell's patterns is shown in Figure 2. These results encouraged further research.



Pre-Instruction Post-Instruction

a. Teacher Stimulus
b. Deaf Child's Response

Figure 2. Pre- and post- instruction responses of deaf girl's imitation of a teacher's rising pitch pattern of the vowel

The next phase of research with the Instantaneous Pitch-Period Indicator was a learning experiment with normally hearing adults. Dolansky, Pronovost, Karis and Phillips /3/ compared the abilities of three groups of adults who learned to match vocal pitch patterns under three different conditions of stimulus presentation and self-monitoring. Each group participated in a training session, a practice session and a testing session. One group learned and was tested under conditions of auditory stimulation and feedback. A second group learned under conditions of combined auditory and visual stimuli, with instantaneous auditory feedback and delayed

visual feedback, but were tested with only visual stimuli and instantaneous auditory feedback. A third group learned under conditions of visual stimulation and instantaneous visual feedback while auditory feedback was substantially reduced by a 95 decibel masking noice.

The fewest number of learning trials was required by the auditory-visual group, while the visual-group required significantly more learning trials than either of the other groups. Some potential subjects for the visual could not meet learning criteria. A total of 17 subjects were trained before an experimental group of twelve subjects could be obtained. Comparison of the three groups during the testing session revealed similar test scores. Thus the group which had trained on the Instantaneous Pitch-Period Indicator under conditions of simulated partial deafness, i.e., visual stimuli, instantaneous visual feedback, and masked auditory feedback, retained the learned patterns to the same degree as the other experimental groups. There was, however, a tendancy for some subjects tested with only visual stimuli to reverse pitch patterns, i.e., they would see an upward pitch pattern but would produce a downward pitch pattern of similar forms. The results of the experiment indicate that an imitative vocal task can be learned through visual information alone, but that some subjects will have difficulty using the visual information.

Current research is being conducted with groups of deaf adults and deaf children. A battery of visual perceptual tests in being administered to determine whether success in learning to use the visual information can be predicted. It has been found necessary to devise a carefully planned sequence of vocal tasks, which permit success rather than discouragement.

It is expectet that a transistorized version of the Instantaneous Pitch-Period Indicator can be constructed in a unit the size of a five-inch oscilloscope. It is probable that the polar analyzer circuit of the Voice Visualizer can be incorporated into the same unit so that a teacher of the deaf may use the same unit for more than one aspect of speech.

Results of research completed thus far indicates that the deaf will be able to use visual displays of speech information to monitor their speech, provided the lessons are carefully programmed, and used in conjunction with auditory and kinethetic approaches to the development of speech in the deaf.

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CONTINUITY IN THE METHODS OF WORK WITH SPEECH BOTH IN THE KINDERGARTEN AND AT ACHOOL AS A PLEDGE OF SUCCESSFUL MASTERING OF SPEECH BY A DEAF CHILD

/The paper/

In this report we would like to give an account of our experiment in teaching deaf children to speak, which we started in a kindergarten under the supervesion of B.D.Korsunskaya and continued on the material of the school syllabus.

After four years of training in the kindergarten children mastered elementary colloquial speech. Elementary notions envisaged by the programme were verified and formed by them, as well as some grammar generalizations. It is already in the kindergarten that children acquired shill of coherent narration and lip-reading. At the pronounciation lessons children were trained to pronounce all the sounds, excluding fricative sounds.

At the end of their training in the kindergarten the children of this group had a vocabulary of about 2000 words.

Now we can say, however, that the vocabulary could have been richer. Contracted vocabulary is likely to be explained by our inexperience and experimental character of teaching.

The group of children in which the experiment was carried on entered the first grade at school in full capacity.

The tutor and the teacher who conducted this group from the moment these children entered the kindergarten continued to work with the class at school. At school we seek to maintain the same principles of work which we followed in the kindergarten.

Thus there was no drastic change in life conditions, activity or teaching when children entered the school.

At it was done in kindergarten in the process of work with speech at school, especially in the first and second grades, we tried to give children the basic verbal material as a signal a guidance to action, as a means to designate visually perceptible articles, their qualities, actions. The same method was used to teach descriptive and narrative speech, and in work with texts.

For this purpose creative games, observations of the nature, elementary household work were used in the kindergarten.

At school various kinds of educational and household labour activities enable to directly combine the training of children in practual actions with the development of their speech as well as verbal and logical thinking.

Pupils activities arouse in them need in communications, stimulated their speech activity and the development of independent speech.

The study of nature and people, practical activity of the children themselves provided a visual basis for forming in them a correct relation between the word significance, the meaning of the sentences and concrete objects and phenomena of the surrounding world.

We tried to arrange our work in such a way that the statements made by children about the natural phenomena should have a concrete character and should be a result of their own daily observations, recorded in an observation log book. Besides that the observations were made during excursions.

Due to this fact compositions written by children in which they sum up their observations of nature are concrete and reflect the children's ideas. Our studies revealed the fact that in the classes where there were no such observations of the concrete natural phenomena, the children's compositions on the same topic were either expositions of the texts from books learned by heart, not corroborated by examples from personal experience, or they were of abstract character. Sometimes it was just a description of winter or summer phenomena having no relation whatever to the composition topic.

Striving to foster the ability of children to narrate their thoughts connectedly while correctly establiging logical relations between the events and phenomena, we used visical situations, children's practical activities, in particular lessons in manual labour, at which they acquire labour experience. At such lessons they were taught to work with fabrics, paper, cardboord, natural material and to acquaint themselves with these objects.

We connected the process of mastering different labour shill by children with the process of mastering speech without any detriment either to labour activity or to speech. The objects which children created at labour lessons usually had some practical value. Interest in the results of their work is a motive for children's statements. At labour lessons children put questions, ask for explanations, answer questions, express their requests and feelings.

Work over coherent speech in the process of labour was conducted in the following sequence:

a/ directly in the process of labour children mastered specially selected vocabulary and phraseology, related to the particular kind of labour. Thus children learned great number of special terms: names of the tools, materials, their qualities, parts of the objects and such words as a team, a team master, a conveyer, a waster, an inspector, a plan, economy etc.

At these lessons the children learned many names, actions. The names of actions were introduced as commissions /fold in two, knead, smooth out, cut off, etc./.

Through answers to questions: "What have you done", "What are you doing?" "What will you do?" the children learned other forms of these verbs;

b/ teaching the children to understand connected narrative describing the work in its process, and also to describe the work they do in the form of a connected narrative. During the first school year we made some 50 narratives like this:

c/ teaching the children to understand the plan of work to be done, presented in a form of connected text and to make such a plan individually;

d/ reading a story on a given topic using the proper vocabulary learned at labour lessons.

e/ using visual aids /pictures, posters, slides/ to consolidate the vocabulary and to make its active use possible.

The speech habit mastered at special lessons aimed to teach to form and generalise and texts based on the results of children's activities and observations served as initial steps in teaching them to read.

We oppose our method to the one which teaches children to read texts through extensive additional explanations and the use of such form of an explanation as interpreting them by means of other words.

A special comperative study showed that such explanations result in inaccurate and sometimes erroneous concepts with children. Explained in this manner the word is attached to some vague immage and contributes nothing to the knowledge of children save for new sound characteristics of the word, which is either almost never used or used loosely or irrelevantly.

Thus in the textbook for the first grade the word "respect" is explained as "love". Based on this explanation of the word "respect" and answering the question "Whom do you respect?" the children named many objects from mother, father, teacher to little brothers and sisters. One of the pupils said: "I respect my sister Ludochka" who is only two years old. Another pupil made a statement about his respect of the cat, and added an explanation: "Fine soft hair".

Such examples of vague and erroneus concept are known to surteachers. The texts used for reading in our class, especially during the first years of study were descriptions of excursions, games during out of class time, various events in life of children, stories prompted by pictures, posters,slides.

Vocabulary learned at the lessons of labour, reading and speech development lessons not only provided for further comprehensive reading of specially selected stories on the same topic but also cultivated in children a love for reading.

To broaden the meaning of the words and to make it more precise we offered the children texts for reading so that the words used in one story would also be used in the other but in a different context. Such method of speech formation ensured positive results: broadening of vocabulary, development of

the skill of connected narration, understanding of a connected story, love for individual reading.

In forming concepts the same way as in kindergartens, we aimed at developing a concept full of specific meaning, so that in use it would develop still further and acquire a more precise and full meaning.

The work at grammatical generalizations was so arranged that out of many specially selected exercises the children could make conclusions, generalize linguistic fenomena, draw a rule and memorize it.

To become a reliable means of communication for a deaf child oral speech should be distinct enough, and our main task at school was not so much teaching new sounds but correction of wrong pronounciation of words by individual pupils. Much attention is paid at school to stress in words, logical stress in sentences and also to development in children an ability of incorporating melody in oral speech. The pronounciation undergo betterment in the process of learning elocution of poems, fables, extracts in prose. We inspire the pupils to constant reflected pronouncing of all the material for oral speech both in class and out-of class with the aim to improve lip-reading. While in kindergartens such pronouncing based on reading from lips of teachers or educators was some what schematic at school it became complete and correct.

We believe that constant control for the children s pronounciation is a basic condition ensuring distinct speech of our pupils.

Continuity in method of teaching oral speech at kindergartens and schools ensures effective results of work as compared to the results where this continuity was not observed.

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DIAGNOSTIC IMPORTANCE OF MUSICAL FACTORS OF SPEECH IN DEAFNESS

/A paper/

Formation of musical factors in speech of children /9-13 years old/ with various degrees of hearing defects originated at different periods of lives was examined. Musical factors of question sentences recited from memory 3 times /"Are you going to be at home tomorrow?" and answers "I shall be at home tomorrow"/ were recorded by means of Grutzmacher instrument /modified by prof.dr Janota/, registering melody and with oscilograph and sonograph. The recorded sounds were analysed and statistically elaborated.

From the results of analysis follows that development of musical factors of speech does not deviate from norm toward the lowest degree of ontogenetic development. Their development is being checket at the stage at which the hearing disorder occurred. This is substantiated by confrontation of statistical results with data defining the moment when the disorder of hearing occurred among particular groups of children, in confrontation interpreted basing on literature dealing with development of musical factors in hearing children.

Checking the development of musical factors at this stage at which the disorder of hearing happened permits to conclude that not only the degree of hearing disorder but above all the moment when deafness occurred is decisive about the character and degree of the disorder. Typical shapes of the course of musical factors permit to define the degree of hearing disorder and the time of its occurrence. This may constitute an important contribution to present diagnostical methods of deafness especially in doubtful cases /interviews not complete, inadequate results of audiometric examination/ more so that it was obtained with an objective method.

Below are specific features of forming musical factors of speech depending on the degree of hearing disorder.

Melody

The melody which among the hearing is placed at the lowest - with a children of defective ear takes more and more higher place but among the deaf it is however lower than in children with remnants of hearing. The children with remnants of hearing and deaf ones do not distinguish also vocally two patterns of sentences, their melody form annihilating semantic differences of both enunciations. Melodious intonation of interrogative sentence, its characteristic raising pitch from last but one to the last syllable of the last word disappears though being typical for the hearing. The descending intonation of affirmative sentences is also not being kept. In the deaf children and in those with remnants of hearing - both in interrogative and affirmative sentences the melody descends between the fifth and sixth syllable. In the hard-of-hearing the placement of melody /having slightly higher intonation than in the hearing/ and its shape approximates the norm. The proper shape of melody for both kinds of sentences is completely palpable in that group of children. The changes in hard-of-hearing have rather quantitative character. In deaf children and in those with remnants of hearing they pass into qualitative ones. It is also shown by higher placement

of the first syllable of every word in result of which the speech of the deaf and with remnants of hearing takes one the features of articulation resembling syllabizing or scansion. The features of a melody, characteristic for the deaf are also peculiar for the children with remnants of hearing /with exception of placement/.

In children with defective hearing the deviations forming the movement of pitch increase. Peculiar for movement of height of tone in melody of the hearing are first of all essential differences of range in successive syllables. In the hard-of-hearing the span of range of movement of height of tone is smaller than in the hearing and has approximate values in particular syllables and is being formed similarly in both kinds of sentences. In children with the remnants of hearing the range of movement of height of tone has, as a rule, greater values than in the hearing. It is irregularly differenciated in particular syllables acquiring very small values in some children and very great in the others. In the deaf such irregularity becomes stronger. The causes of monotony ought to be sought in the lack of differenciation of range in particular syllables and in steady repetition of its course as well as the same course of melody having nearly horizontal shape.

Pitch

In the hearing the course of pitch in particular syllables has a wavy shape distinctly dropping in both kinds of sentences while the first syllable has the highest pitch and the last one the lowest. In children with auditory defects it becomes flattened considerably. In this course an irregular, higher placement of the first syllable of every word appearing already in the hard-of-hearing and especially of the first and the second in the children with remnants of hearing - particularly in interrogative sentences in the deaf is very distinct. Flattening of the course is conditioned in children with auditory defects by small differences in pitch between successive syllables which in

comparison with the hearing children becomes particularly distinct especially between the first and the second, the fourth and the fifth syllable as well as by small range in pitch of the whole sentence whether it is interrogative or affirmative one. Formation of average, peculiar for pitch in children with defective hearing is much higher than in the hearing, particularly in children with remnants of hearing and in the deaf not much lower from conventional pitch of the first syllable.

Peculiarities in the course of pitch, characteristic for children with auditory defects, are those factors which ought to be connected with monodynamy of speech. Together with disappearing of difference in the course of pitch in both kinds of sentences they lead to annihilating of the difference in meaning of both enunciations.

Rythm and Duration

The duration of syllables and rests in an interrogative and affirmative sentence in comparison with the hearing is not much larger in the hard-of-hearing, much so in the children with remnants of hearing and the largest in the deaf. It differs essentially in particular groups of children showing greater values in an interrogative sentence than in an affirmative one. An analysis demonstrates not only deviations in forming of duration of syllables and rests in particular groups of children with auditory defects, it permits also to register a disorder in rythmical pattern of both kinds of sentences.

Essential differences in duration of syllables appear however they are not expressed in large values and deviations in forming duration of syllables may be taken as quantitative while in children with remnants of hearing and in the deaf they acquire qualitative character.

Large values of duration of rests in irregular formation of duration of syllables contribute to a great extent to illogical dismemberment of a sentence with greater and greater of its prolongation. Differences in duration of

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successive syllables disappearing with the degree of hearing disorders impose on speech a monorythmic character and irregular, accidental and variable duration of successive syllables an arythmic one.

The results of research suggest the necessity of elaborating a medical method for rehabilitation of musical factors, such that includes within its scope deviations from norm essential in understanding the speech of the deaf. Very important is detecting of those factors which underwent the earliest deformation and beginning of their medical rehabilitation. Early medical rehabilitation ought to cover first of all the children with remnants of hearing basing on the remaining hearing. Lack of introduction of auditory stimuli, especially speech, at the beginning of disorder, contributes to atrophy of remnants of hearing thus hampering the rehabilitation at the later period.

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A CONTRIBUTION TO AUDIOLOGICAL PROBLEMS IN HUMAN COMMUNICATION

/The paper/

In treating disorders of human communication we often encounter the phenomenon: the child does not react to sound. And all too often we find that is sufficient reason to conclude the child is deaf. Such a conclusion is not at all logical. The reason the child does not react to acoustic stimmuli may be due to any one of a number of pathological processes, one of which may be hearing disorder.

Hardy /1962/ draws special attention to these circumstances. According to his information one-fifth only showed clearly hearing disorder from a group of children which failed in auditory screening test. This means that among four-fifths of the children which did not react to acoustic stimuli there were pathological causes other than deafness.

We consider Hardy's statement extremely important for the logopedical practice. If, on the basis of an incorrect diagnosis, a child is put in a school for the

deaf, it can adversely affect its entire future. Ascertaining the causes of hearing disorders is therefore an extremely responsible act.

In our opinion the reflex theory supplies the safest methodological tool in this respect. Modern reflex theory, based on Pavlovś teaching, is amplified by the latest discoveries on neurophysiology and psychology and even by the theory of information. It leaves the concept of a closed reflex arch and accepts the thesis of an open reflex circuit. Within this concept it is possible to balance the individual and social factors very accurately and delicately.

The reflex circuit starts in the social environment. Stimuli from the social environment go through the individual, from the receptor to the effector. Behavior is then modified by the attitude of the social environment; the resulting behavior processed by social factors, becomes a further stimuls for the individual. Stimuli from the social environment are transformed by the individual and returned to social environment.

If there is a disorder in any phase of reflex circuit, then the passage of the stimuli is deformed or even totally blocked. In such a case the resulting reaction is equally deformed or blocked. It depends on which phase the reflex circuit is disordered: blocking in the initial phases has more far-reaching consequences for the development of the individual than a disorder of the expressive or even performing phases. It depends on the time when the disorder occurs, too: there are more far-reaching consequences in an early disorder, which afflicts an undeveloped function, than in a disorder of fully developed function.

The causes of "non-reaction to acoustic stimuli" may exist in certain phases of the reflex circuit:

1. Social, i.e. the educational environment does not provide adequate stimuli. Too powerful or too frequent stimuli cause inhibition. Acoustic stimuli which do not

have biological meaning for a child gradually extinguish, i.e. the orientation reflex as biologically insignificant is suppressed. A too weak stimulius remains below the level of perception.

2. Receptive part:

a/ The acoustic analyser plays its role in analysing sonds. The receptor, i.e. the essential hearing organ, performs the basic analysis of sounds. The crackling sounds as phylogenetically older and the tones and complex sounds as phylogenetically younger are differenciated in Cortis organ. A disorder of the receptor results either in blocking i.e. in deafness, or in deformation, i.e. qualitative change of perception; a special case is schizacusis, i.e. the inability to perceive complicated sounds and therefore the blocking of reaction in verbal communication. The neural tracts and lower centres, to which belongs the reticular formation, have functional importance for the so-called non-specific perception and effective accent. A disorder of this region probably causes a lowering of acoustical sensibility. This is a case of listening disorder.

The cortical area of the hearing analyser analyses sound qualities, especially timbre. In view of the fact that the cortex centres are connected with the auditory receptors on both sides, a lesion of the centre on on side only can not result in deafness. Experiments with exst-irpation of cortical hearing analyser on both sides, according to Pavlov, caused only temporary deafness, during which the orientation reflex to sounds maintained. Cortical hearing disorders dont mean blocking but deformation of auditory perception /Luchsinger-Arnold/.

b/ The conjunction of the acoustic analyser with the other analysers performs the analysis and synthesis of acoustic stimuli. By means of sensomotor imitation reflexes the organismus respondes to sound by producing

sound /vocal/ reaction. Through the conditioning the motor reactions to acoustic stimuli are elicited.

Because of the extremely wide range of possibilities for associative function among the analysers it is difficult to find a localised lesion of a given function. Imitation reflexes as a transient form between lower and higher nervous activity may persist also in the case of idiocy; conditioned reaction to sound is possible even in the case of imbecility.

c/ Hearing centres connected with other centres perform the gnostic function /eugnosia/: the recognition of sounds, i.e. perception, association and retention of the complex of ideas associated with sound. Auditory agnosia is a developmental disturbance in the perception of meaningful sounds at all /imperception according to Jackson/. In such a case the the performance of further phases of the reflex circuit is blocked.

3. To explain the central disorders of communication processes we accept the threephase division of the central processe /according to the American authors - Wepman, Jones, Bock, Pelt/.

a/ in the input recognition of the acoustic structure of words takes place, i.e. decoding in the sense of the theory of information. The disturbance in the recognition of verbal sounds is called verbal agnosia, or word-deafness. It is essentially the same as which Hardy calls "auding" and Lurija "phonematic hearing". If this disturbance occurs during/after speech development, complex of symptoms responds to sensory aphasia type Wernicke. The lesion is localized in cortex area of the dominant hemisphere.

b/ In the integrating part understanding and programming takes place. This has to do with the speech regions of the cortex of the dominant hemisphere, integrated in the brain stem /Penfield/. Developmental disorder of this function together with defect of the intellect occurs in oligophrenia, a disorder acquired later in life

occurs in dementia. Isolated disorder of this integrating /symbolic, semantic/ function in communication is termed total aphasia.

c/ in the output corresponding reaction is formed through so called encoding, on the basis of programmed formulae. In the event of lesion speech apraxia takes place, symptomatologically equivalent to motor aphasia.

4. The expressive /motor/ part coordinates the reaction. The blockade in the motor areas or nervous motor tracts makes the motor as well as speech reaction impossible.

5. Social factors influence the reactive behavior:

a/ attitude of social environment, i.e. social feed back, may either strengthen or inhibit the reaction - according to the principle of success or failure, including the communicative reaction.

b/ The reaction of the social milieu may make childs manifestations modified through neurotic phase--conditions. Then the child reacts neither to speech stimuli nor to sounds at all under the condition of generalized inhibition /ultraparadox phase/.

The motives not to reflect the acoustic stimuli are in the social as well as in individual factors or in combination of both in various type and degree. Therefore the developmental or acquired disorder of the ability to react to acoustic stimuli may be caused in various manner and manifested in various symptoms:

1. When there is no stimulation, the hearing ability remains undeveloped or neglected.
2. When the function of receptor is blocked, the child does not hear, is deaf.
3. When the auditory tracts are afflicted /in connection to reticular formation/, the child can potentially hear but does not listen.

4. When cortical auditory area is disturbed, the deformation of hearing follows.
5. When the analytico-synthetizing functioning of cortical areas /analysers/ does not work, the sensomotor imitation reflexes cannot be activated.
6. Auditory agnosia makes the child hear but not recognize the source of sounds; consenquently there is no need or use to listen.
7. When the central areas of communication are disordered, there is no ability to evaluate the acoustic stimuli and to understand the speech sounds; the reactions to acoustic stimuli are performed on the lower level of the nervous activity.
8. Blockade in the motor parts disables the response. The child can hear and understand but is not physicallly able to react.
9. When social and educational relations are defective, the child is able to hear and listen as well as understand but is inhibited in its reaction to social communication.

It becomes obvious that the examination of hearing must be only a part of complex examination and long observation.

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PROSPECTUS OF PATTERNING
/The paper/

The field of education, challenged and accelerated by the technological advances, has spent the last decade analyzing and evaluating its status and its goals. And with Bruner /3/ we feel that "Experience over the past decade Points to the fact that our schools may be wasting precious years by postponing the teaching of many important subjects on the ground that they are too difficult." We hold "the proposition that the foundation of any subject may be taught to anybody at any age in some form". The basic ideas that lie at the heart of all science and mathematics, along with the basic themes that give form to life and literature are as simple as they are powerful. To be in command of these basic ideas and themes, to use them effectively, requires a continual deepening of one's understanding of them, which comes from learning to use them in progresively more complex forms.

It is in this same spirit that we are in Warsaw today — to meet, to share, to analyze, and hopefully, to find answers. Answers, which to us, as educators of hearing handicapped children, are vital — vital because these answers will affect the lives of hundreds of deaf children around the world.

We at St.Joseph Institute for the Deaf feel that we have found an answers to one area of language; that The Pattern, as developed at St. Joseph's truly linguistic;

that it has been built on the analysis of the structure of language; and having such a basis, provides the child at a very early age with this underlying structure, enabling him both to understand language and to produce it with greater ease, naturalness and correctness.

The Pattern /1/ came into being through listening, through reading, and through analyzing; for in listening and in reading and in analyzing, a particular pattern on which English was built and on which it is expanded became clear. Descriptive Linguistics now uses such terms as Kernel Sentences, Imbedding, and Transformations, to describe what to a teacher's ears was an organization of language, which could possibly be presented to the child in an organized manner. It is the analysis of the manner of presenting this body of language to the child that makes The Pattern the powerful tool it is today.

In listening, and in reading children's texts, six basic patterns were revealed: VERB, WHAT /e.g. wear your coat/; VERB, WHERE /e.g. go downtown/; VERB, WHAT, WHERE /e.g. put it on the table/; VERB, ADJECTIVE /e.g. be alert/; VERB, WHOM /e.g. help mother/; and the last basic pattern: VERB, WHOM, WHAT /e.g. hand me a pencil/.

Saying that these patterns were truly the basic patterns of English, the command form of the sentence seemed the logical place to begin, and it is on this form that The Pattern is developed. Let's look for a moment at each of these patterns:

The first, /VERB, WHAT/, or using the Fitzgerald Key Symbol .= WHAT , has numberless examples spoken in everyday conversation:

Open the door.	Shut the window.	Read you book.
Play ball.	Erase the board.	Erase the paper.
Get a letter.	Ride your bike.	Clap your hands.

The second, =WHERE :

Go to the door.	Walk outside.	Run down the hall.
Stand near John.	Sit over there.	Climb up the ladder.

The third basic pattern, [== WHAT WHERE] , too, has endless examples in everyday conversation:

Open the book to page 24. Put the chair near the wall. Draw a man outside the door.

The fourth basic pattern proves a very practical one: [== ADJECTIVE], or using the Fitzgerald Key Symbol [= ~] :

Be alert. Be careful. Be good. Be attentive.

[= WHOM], the fifth pattern has such examples as:

Help mother. Ask father. Tell John. Find Mary.

Examples for the sixth and last basic pattern [= WHOM WHAT] are:

Give Mary a pencil. Hand me an eraser. Find the baby a toy.

As you look at these patterns, two of several reactions could by yours: one, they're so simple; and two, they're really not new. These reactions would both be legitimate and actually it is in its simplicity and its familiarity that The Pattern possesses its greatest value. For the child, too, experience esse in learning, and responds positively to their familiarity, a familiarity built up by means of repetition, easy, enjoyable, valuable repetition. And this is as it should be, for as Doctor Bruner /3/ points out:

> "To be in command of these basic ideas, to use them effectively, requires a continual deepening of one's understanding of them that comes from learning to use them in progressively more complex forms."

The complexity of the language developed with The Pattern is significantly greater than that which a very young deaf child would use. However, the input level of the child's language should be, as agreed by authorities, /4/, at a greater level both in quality and quantity than that which is expected, at first, to be expressed by him. If we agree with linguists, /2/, that a child absorbs language, analyzes its structure, and subsequently generates it, then our task as educators and teachers must be to assure the input be that of maximum quality and quantity.

Listening further, we realize that these basic patterns, in conjuction with supplementary patterns, develop into easy, conversational language — useful, natural and flowing.

May I	read a book?
I like to	read a book.
It's fun to	read a book.
I don't care to	read a book.
Let me	read a book.
Shall I	read a book?
Do you like to	read a book?
Isn't it good to	read a book?
I hope I can	read a book.

The paper itself does not permit further expansion of the supplementary patterns, though an appendix is added. Needless to say, they are endless; as endless as the teacher's awareness of the patterning which exists in both our oral and written language.

To analyze language, and to see its structure, was but half the task. The second part, and for practical purposes the more valuable, was that of helping the child to learn this structure and to generate language accordingly.

Working on the philosophy of maximum input, our children, the very youngest, were bombarded with language, much of it being in the imperative form. Realizing that communication demands response, the children were taught to respond appropriately to such commands as "Go to lunch." with "All right, Sister." "Be careful." with "I will." thus providing the basis for "I will be careful." "Don't run in the hall." with "I won't." to become "I won't run in the hall."

Simple declarative sentences, both for receptive and expressive language were provided in abundance. Sentences such as:

I like to play dolls.

I want to buy chocolate ice cream.

John wants to go skating.

It's fun to go hiking.

I know how to roller skate.

I forgot to brush my teeth.

I have to go to the dentist.

provided the children with language for self-expression of their everyday experiences and needs.

It is important to remember that the ratio of receptive language to expressive language is always greater for reception. And, as the child was being fed language, his output was of less magnitude. Critical to us as educators, though, is a full realization of the importance of providing the child with multiple perfect patterns of language in many situations, before this is demanded in return. Our failure perhaps, rests in providing too few and too imperfect patterns of language, denying the child his basis for growth.

Keeping this in mind, language shows a progression of development. From simple sentences the child grows into more complex language. The Pattern, as I will illustrate, provides the structure of every type of sentence:

Simple sentence

I can read a book.

Complex sentence

I can read a book which is written in German.

Compound sentence

I can read English , but I can't read German.

Complex-Compound

I can read English , but I can't read Japanese because the characters are so strange.

Gerund used as a subject

Reading books is an excellent pastime.

Gerund used as object of a preposition

I gain much from reading books.

Gerund used as a predicate nominative

My hobby is reading books

Gerund used as a direct object

I enjoy reading books

Infinitive used as a subject

To read a book is relaxing

Infinitive used as a predicate nominative

My favorite pastime is to read books

Infinitive used as direct object

I like to read books

Infinitive used as object of a preposition

I was about to read my new book

Infinitive used as an adjective

I have many books to read

Infinitive used as an adverb

I went to the library to read my book

Noun clause used as a subject

That I like to read books is true.

Noun clause used as a predicate nominative

The truth is that I like to read books

Noun clause used as direct object

I know that John likes to read books

Noun clause used in apposition

It is true that I like to read books

Work on questions, which challenges every teacher of deaf children, is made quite simple and logical when taught in The Pattern.

When will = ?
How will = ?
Where will = ?
Why will = ?
Whose ___ will = ?
Whom will = ?
What will = ?
What kind of ___ will = ?

When did = ?
How did = ?
Where did = ?
Why did = ?
Whose ___ did = ?
Whom did = ?
What did = ?
What kind of ___ did = ?

When does = ?
How does = ?
Where does = ?
Why does = ?
Whose __ does = ?
Whom does = ?
What does = ?
What kind __ of does = ?

When do = ?
How do = ?
Where do = ?
Why do = ?
Whose __ do = ?
Whom do = ?
What do = ?
What kind of __ do = ?

Indirect discourse, too, can be made more simple and logical when presented in this method.

Mary told me to = .
Mary told me not to = .
John asked me if I would = .
John asked me if he should = .
John asked me if he could = .
Jim told me that he would = .
Jim told me that he could = .
Jim told me that I should = .

The Pattern, as it has been used and developed over the years at St. Joseph Institute for the Deaf, has provided a means of growth in our children's language — in its fluency, in its naturalness, and in its complexity. The sources of the material for The Pattern are many: the language outline, the reader, and all its new vocabulary and textbooks, as the child begins to use them.

The real value of The Pattern is grasped only when it is used. For in using it, it is similar to a many-sided jewel — the more one turns it, the more its beauty is seen; the more one holds it in the light, the more its secrets are revealed. The Pattern to us has proven a treasure, a hidden treasure, to be unlocked by each teacher with each class of children. It is our strong belief that "blessed are the children who are provided with this stimulating, organized, generating, approach to language; they shall possess richness indeed!".

REFERENCES

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/2/ Bellugi and Brown, R. The Acquisition of Language. New York: Monograph Society for Research in Child Development, 1964.

/3/ Bruner, Jerome. The Process of Education. New York, Vintage Books. 1963.

/4/ Menyuk, Paula. Descriptions of Acquisition and Development of Grammar. Unpublished writing presented at NDEA Institute on Language for the Hearing Impaired. Columbia University, 1966.

The Appendix will show, I believe, the great riches of language which The Pattern holds.

Aware that these concepts, to be fully grasped, need to be accompanied by visual aids, transparencies of the patterns would accompany the presentation of the paper.

APPENDIX

May I [=] Please?

I can [=].

I can't [=].

I forgot to [=].

I didn't forget to [=].

Did you [=]?

Shall I [=]?

I might [=].

Let's [=].

I want to [=].

I don't want to [=].

I would like to [=].

I didn't [=].

Be careful not to [=].

Be careful to [=].

It's time to [=].

Hurry and [=].

I'm finished [=].

I must not [=].

I'm too busy to [=].

You told me to [=].

I promised to [=].

Let's not [=].

Let's not forget to [=].

Please remember to [=].

Help ♀ [=].

I must [=] .

[♂] told me not to [=] .

[♀] , please help [♂] [=] .

I'd be happy to [=] .

Would you like for me to [=] ?

I wish I could [=] .

[♂] wants to [=] .

I don't know how to [=] .

[♀] doesn't know how to [=] .

I like to [=] .

I don't like to [=] .

Do you want to [=] ?

I know how to [=] .

It's fun to [=] .

Do you like to [=] ?

Does [♂] like to [=] ?

Are we going to [=] ?

Do I have to [=] ?

[♀] has to [=] .

I have to [=] .

I hope I can [=] .

We always [=] after school.

It's lots of fun to [=] .

I would like to help [=] .

I like to [=] everyday

My family likes to [=] .

I hope [♂] lets me [=] .

♀ went where to [=] .

Maybe ♀ can [=] .

Ask ♀ to [=] .

♀ began to [=] .

Please [=] in a hurry.

After we [=] , let's [=] .

♀ wanted to [=] and [=] .

♀ was about to [=] when _____ .

Don't [=] .

But ♀ could not [=] .

♀ made ♀ [=] .

♀ was [= ing] as fast as ♀ could.

Please make ♀ [=] .

If ♀ comes here, [=] where.

Forget about [= ing] for whom.

Let's go [=] .

♀ let ♀ [=] .

We will have to [=] .

Maybe ♀ can [=] .

We will have to forget about [= ing] .

See if ♀ can [=] .

Not once did ♀ [=] and [=] .

♀ could [=] , but ♀ couldn't [=] .

You had better [=] .

I don't want to [=] or [=] .

I think I'll [=] when.

I must [=] before I [=] .

I'll [=] and [=].

I never like to [=].

I would be glad to [=].

Should I [=] where to [=]?

Show where to [=].

got ready to [=].

showed how to [=].

I don't want to [=] when.

You can [=] or [=].

can't [=] or [=].

You could [=].

You may help [=].

did not [=] for what.

was tired of [= ing].

You must start to [=].

stopped to [=].

I'll try to [=].

saw [= ing].

liked to [=].

I'll show you how to [=].

 asked to [=].

It was time for to [=].

had to [=].

went to [=].

 [=] so can [=].

You are supposed to [=].

You are not supposed to [=].

I remembered to [=] .

Remind [♀] to [=] .

It's [♀] 's job to [=] .

I hope you don't forget to [=] .

I'll try to [=] .

[♀] decided to [=] .

Do you have time to [=] ?

Did you remember to [=] ?

Will you please [=] ?

Get ready to [=] .

I'm ready to [=] .

While [♀] [= s] , I [=] .

I always [=] while [= s] .

[♀] , [=] while I [=] .

Sometimes I [=] while I [=] .

I didn't [=] because I had to [=] .

[♀] didn't [=] because [♀] had to [=] .

When [♀] is finished [= ing] , we will [=] .

When [♀] was a little boy, [♀] used to [=] .

When [♀] [=] , you may [=] .

[=] when you are finished [= ing] .

[=] ins[illegible] of [= ing] .

Instead of [= ing] , please [=] .

[♀] , [=] instead of [= ing] .

As [♀] was [= ing] , she [=] .

Don't [=] until [♀] [= s] .

You cannot [=] until [♀] [= s] .

Is ♀ going to [= ?]

I can hardly wait to [= .]

Doesn't anyone want to [= ?]

I'm going downtown to [= .]

I'm going upstairs to [= .]

Tell ♀ to [= .]

Before you [=] please [= .]

Always [=] before you [= .]

I usually [=] before I [= .]

♀ usually [= s] before he [= s .]

♀ , [=] and then [= .]

Don't [=] before [= .]

♀ , please try to [= .]

I'm starting to [= .]

I'm trying to [= .]

You don't have to [= .]

If I can't [=] I want to [= .]

First let's [=] then we can [= .]

[=] and [= .]

First [=] then [= .]

If you [=] you will [= .]

If ♀ wants to [=] , we must [= .]

♀ was going to [= .]

♀ is going to [=] where.

♀ had to [= .]

♀ had to [=] again.

I want to see how you [= .]

Who did not = ?
Who will not = ?
Who doesn't = ?
Who wouldn't = ?
Who Couldn't = ?
Who shouldn't = ?
Who may not = ?

What did = ?
What didn't = ?
What will not = ?
What won't = ?
What do = ?
What does = ?
What will = ?
What would = ?
What could = ?
What couldn't = ?
What should = ?
What shouldn't = ?
What wouldn't = ?
What doesn't = ?

Why did = ?
Why does = ?
Why do = ?
Why didn't = ?
Why doesn't = ?
Why will = ?
Why won't = ?

Where did = ?
Where does = ?
Where do = ?
Where will = ?
Where would = ?
Where should = ?
Where could = ?
Where couldn's = ?
Where shouldn't = ?
Where wouldn't = ?

When do = ?
When does = ?
When did = ?
When will = ?
When doesn't = ?
When didn't = ?
When should = ?
When can = ?
When could = ?
When can't = ?
When won't = ?
When shouldn't = ?

Who = s ?
Who = ?

V KONGRES ŚWIATOWEJ FEDERACJI GŁUCHYCH – WARSZAWA 1967
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ADJUSTMENT TRHOUGH ORALISM

(The paper)

The year 1967 marks the 100th year since oralism began in the United States, with the founding of the Clarke School for the Deaf and the Lexington School for the Deaf. Therefore, it is particularly appropriate to examine how oral education has influenced the adjustment of a group of oral deaf prople to the world in which they live. The discernible integration of these particular oral deaf persons into society will be reviewed from the sociological and psychological standpoint rather than from the more common educational standpoint. The latter approach has often degenerated into battle of methods which has shed little light on the ultimate objective of the education of a deaf child; namely, his successful performance as an adult in the society in which he finds himself.

The unique group of oral deaf adults, taken as the basis for these empirical observations, is not large in numbers. However, the members of the group are intelligent, articulate, and have displayed little hesitancy in talking about their attitudes and experiences. Thus they represent a sample that is interesting, candid, and available for observation under such sociological concepts of deviance, stigma, marginality, family structure, and social environment, all of which have been of concern to the sociologist interested in

rehabilitat n recent years.[1]

The Oral Deaf Adults Section

The A. xa. er Graham Bell Association for the Deaf was organized n 1890 by Mr. Bell to act as an international informatio center on deafness and to promote the teaching of speech and preading to the deaf. In 1963 a small group of oral deaf mbers of the Bell Association petitioned the Board of re tors to officially recognize them as deaf adults carried their oral philosophy and habits into their adu t life. The Board responded favorably and in 1964 at Salt Lake City, Utah, the Oral Deaf Adults Section (ODAS) of the Alexander Graham Bell Association for the Deaf was f unded. Its membership today consists of approximately 175 eaf people over the age of 21, all of whom consistently use, and prefer to use, speech and lipreading for communication with both hearing and other deaf people. Furthermore, by their membership n ODAS, they have declared their willingness to actively promote oral education by speaking to parents, teachers, and deaf youngsters, either i groups or individually.

Deviance

If deviance, or "variance" as some would prefer to call it,[2] denotes abnormal behavior that calls attention to an individual, then the typical oral deaf adult might be said to abhor dev ance. His appearance of normality among those who can hear is very important and, while few deaf adults would deny the fact of their deafness, most hold out their oral skills, however imperfect, as a measure of their ormality. Some have gone so far as to say their deafness is not a handicap but an inconvenience, and thus they tend t relegate it to the same category

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1 Sussman, Marvin,B. "Sociological Theory and Deafness: Problems and Prospects; ASHA, 8, No. 8, 1966, p. 303

2 Lisensky, Robert P. =The Family and the Deaf Child", Volta Review, 8, No. 9

as chronic backache.

The speaking and lipreading deaf adult, even at his very best, is rarely able to conduct a conversation with a hearing person without some request for repeating either on his part or on the part of the person with whom he is speaking. Within a family where there has been close association for years, the need for repetition is considerably less. There are many ODAS members whose speech is difficult to understand under the best of circumstances. But this is deviance of a primary nature, tolerated by the deaf person himself because it does not prevent his interaction with others. Likewise it is tolerated by the society in which he is functioning, though hearing people may be embarrassed while getting accustomed to the speech patterns of the deaf. In many instance, however, his speech would be considered no more deviant than that of a visitor who speaks a foreign language and must be helped at times by repetition or rephrasing.

Secondary deviance to which the oral deaf adult objects most stronghly is that characterized by deaf people who use manual communication; i.e., fingerspelling or signs. There is no question that this deviation from the normal means of communication, as evidenced by hand motions accompanying facial grimaces, is highly visible; and the user is penalized by society. ODAS members have been willing to accept overhead projection of speeches at conventions because this is a socially accepted way of helping them. Many hearing people in an audience takeadvantage of the overhead projection, too. But manual interpreters on the platform have been rejected by ODAS as unnecessary and unwanted.

The oral deaf adult is proud of his communication skills. A few can even boast of the fact that sometimes others do not know they are deaf. "I talked to a man beside me on the place for 15 minutes before he learned that I was deaf," remarked one oral deaf adult whose deviant speech

was concealed by the noise of the engines and whose skill at lipreading probably gave him a distinct advantage over his hearing acquaintance.

This sense of pride in being non-deviant, at least at the secondary level, therefore, is a highly significant characteristic of the Oral Deaf Adults Section membership. It tends to help his adjustment with the hearing because he tries very hard to protect this pride. On the other hand, this pride acts to impede, if not prevent, confortable associations with manual deaf people.

Stigma

The same stigma that tends to follow the non-oral deaf adult as a result of his manual communication does not attach to the oral deaf adult. The strong negative attitude of the normally hearing toward the manual deaf person which often results is unconfortableness, if not fear, may be avoided by the speaking and lipreading deaf adult even though his oral skills may be far from perfect. At least he tries to communicate with the hearing, using the means that they use. Thus he avoids the stigma that is immediately aroused by his manual deaf counterparts when they must resort to making gestures that are foreign to the normal hearing person, or to using a paper and pencil.

The effort to avoid the social stigma of deafness is started early in the life of the oral deaf person. His parents, his teachers, and even his deaf friends have probably imbued in him the feeling that if he works hard at lipreading, speech and auditory training he will completely avoid the stigma of deafness. If he has been in a special school for the deaf, the fallacy of this may not hit him until he leaves that school for secondary education or for the world of work. If he has gone to a day class, or if he has had a great deal of contact with

hearing peers, he will have learned that even oral deaf people are different from hearing people. To this child may be better prepared for the less significant, but nonetheless real, stigma resulting from a severe hearing loss. By growing up with it, his adjustment to the negative attitudes of society seems to be greater.

Marginality

Almost all of the oral deaf adults were deaf at birth or lost their hearing before they had developed language and speech. Thus it can be said that they have never been truly a part of the hearing world as could be said of an adventitiously deaf person. On the other hand, the deaf person who has been kept in an oral environment from infancy has never really been out of the world of the hearing as might be said of a deaf person who had attended a large state instruction for the deaf where there were deaf teachers and deaf house parents as well as other deaf children.

Many of the oral deaf adults attended residential schools for the deaf, though these were generally private oral schools which did not engage deaf teachers or deaf house parents and would not tolerate the use of fingerspelling or signs by the students, even on the playground. Upon completion of the eighth or ninth grade, they transferred to junior or senior high schools for the hearing and completed their education there, often being the only students with a severe hearing loss. At no later than mid-adolescence, therefore, all of the oral deaf adults were integrated with hearing youngsters of approximately their own age and in a normal school milieu. These children knew they were deaf, they had been alerted to at least some of the problems expected in a hearing school and how to attack them; and they were as well prepared as most adolescents for the frustration and confusion that accompanies puberty.

A of th AS member who went on for post high school education went to hearing institutions. Integration at smaller colleges seemed easier for many, though a few claim the large universities offred more opportunities for academic and social flexibility.

The oral deaf adult is not welcome generally in the society of the manual deaf unless he is willing to conform; that is, unless he is willing to forego his insistence on speaking and lipreading and resort to fingerspelling and signs. The oral student who attends Gallaudet College, the world's only college exclusively for the deaf, tends to be ostracized. He is considered a "snob" until he learns and is ready to use manual language with his fellow students. Strangely enough, this is a turnabout world where the very skills which the oral deaf student has worked so hard to perfect, before coming to Gallaudet, become a stigma in the largely deaf community in which he suddenly finds himself. In this circumstance as in that involving deaf social clubs, the oral deaf person is much less comfortable than in association with hearing people.

Th leaders of the Oral Deaf Adults Section have received many strong overtures to "join the crowd". Because of their eviden ase of communication with the hearing, their intell nce, and their aggressivenes , they are eagerly sought for positions of leadership by the associations of the anual deaf. While the leaders of the ODAS have resisted hese overtures, some well-equipped oral deaf persons ve, over the years, accepted the invitation to take ove positions of leadership in the large organizations of the manual deaf. Probably the phychological problems of self i entification and emotional wellbeing have been reduced y taking such an overt step into the deaf world. Their oral skills have evidently qualified th m to be leaders of others whose skill in communic tion and whose provinci l attitudes have p evented them from leading their peers.

Family Structure

Very few of these oral deaf adults came upon their oral skills without help. In most cases their dedication and skills in oral communication were stimulated by some guiding adult who was determined that they must be taught to communicate through speech and lipreading. Most often it was a "non-accepting" mother. Psychologists encourage parents to accept the fact of their child's deafness, but this can extend over into an attitude of resignation. Parents of ODAS members consciously rejected the historic image of the manual deaf and would accept nothing less than a speaking and lipreading child. To this extent, the "non-accepting" parents were greater contributors to their child's success than those who accepted the limitations so often cited even by educators in the field.

A mother's sympathetic, but practical, attitude can contribute to the oral deaf child's successful adjustment; but it can smother him also. Some mothers have been unable to "let go" of their orally trained shild even when he or she become an adult. The years of responsibility for maintaining a language-conscious family life, and of insisting on proper speech, can convince a mother that her child cannot function without her guiding hand. Thus the orally-oriented, conscientious mother, who may have given "the best 20 years of her life" to preparing her child for adulthood, is not prepared to release the child to experience that adulthood. She may still answer questions for him, write letters of application for him and even accompany him to interviews.

Oral deaf adults have sometimes complained of the same maternalism by their teachers. "She still talks to me like I were 7 years old", said one 40-years-old businessman after meeting one of his elementary school teachers.

Perhaps it is in an effort to demonstrate to his mother and teachers a capacity to think and act independently that so many oral deaf adults appear egotistic.

Social Movement

While some of the oral deaf adults would deny the need to take advantage of rehabilitation services offered by state and local agencies, others have accepted such help gratefully. Particularly in obtaining financial support to pursue higher education, the oral student has not hesitated to accept loans or outright gifts for tuition and living expenses in order to get a college education or a marketable skill. An element of resistence has arisen, however, when the rehabilitational agency has insisted on approaching the oral client as though he were non-oral. "The practices of some rehabilitational agencies perpetuate social dependency."3 By talking down to the client, by addressing him in signs rather than trying to speak to him, by automatically limiting the horizons for job placement the rehabilitational counselor can alienate a reasonably self-confident oral deaf person to the point where he refuses to consider seeking assistance.

Where the rehabilitational counsellor himself is deaf, there may even be a sub rosa conflict between the client and counselor.

The oral deaf adults have sought careers in direct proportion to their innate talents and their training. Of the 175 members a very few are teachers of the deaf, a caree that is very common among the capable manual deaf. I am sure it is not because a career in teaching has n t been considered, particularly since it is well known hat many graduates of Gallaudet College find

3 Op. c t. Sussman,

careers in teaching at the upper school level in the state schools for the deaf. Rather I believe it is because a reflection on the insights, vocabulary and attitudes which they had gained from their own hearing teachers has convinced ODAS members that only those with normal hearing and speech should teach the deaf.

Some ODAS members , however, are providing counseling service to deaf children and adults. In these professions (i.e., psychology or rehabilitation), however, they are not responsible for academic or communication instruction.

Other careers represented include chemistry, engineering, architecture, art, biology, photography, sculpture, library science, dentistry, computer science, and astronomy.

There is no question that, in addition to their academic preparation, the ability to communicate orally has been important. First in getting an education at an accredited educational instituion for the hearing, then in getting a job and in advancing in their jobs, the capacity to speak and to lipread has been vital. Verbal abilities continue to be recognized as an important factor in the improvement of employment conditions of the deaf.[4]

The oral deaf adults have participated to an average extent in community affairs. Members belong to service clubs like Rotary and Kiwanis, take jobs in the United Fund Drives, accept responsible positions in church organizations, and fill officers' chairs in professional organizations. Some have written for learned journals in their field of speciality, and many have authored articles of an inspirational nature for non-professional publications.

A few outstanding oral deaf adults have actually been able to join the Toastmasters Club, an organization dedicated to helping its members become more effective public speakers.

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[4] Kronenberg, H.H. and Blake, Gary D. "A Study of the Occupational Status of the Young Adult Deaf of the Southwest"

Conclusion

These observations, while based upon a relatively small group of oral deaf people, establish first and foremost that there ARE deaf adults who can and do communicate successfully with the hearing world through the medium of speech and lipreading. Furthermore, we have shown that they are well enough trained and well enough adjusted that they have been able to move into professional positions and compete successfully in out highly competitive society. On the other hand their adjustment is not uniformly successful, any more so than would be said of a similar group of people without a hearing deficit.

The fact of their deafness has been accepted by the oral deaf adults, if not always by their parents. They are proud that they have oral skills, however imperfect, and they are convinced that all deaf youngsters should be encouraged to communicate and be taugh through speech, lipreading and auditory training.

The Oral Deaf Adults Section of the Alexander Graham Bell Association for the Deaf is a service organization, not a social one. Its members have adjusted to their hearing loss in spite of the stigma, the variant behavior, the social problems with the manual deaf, and the other problems that have accompanied their road to independence.